

Field Report

Chincoteague National Wildlife Refuge

■ 1.0 Summary

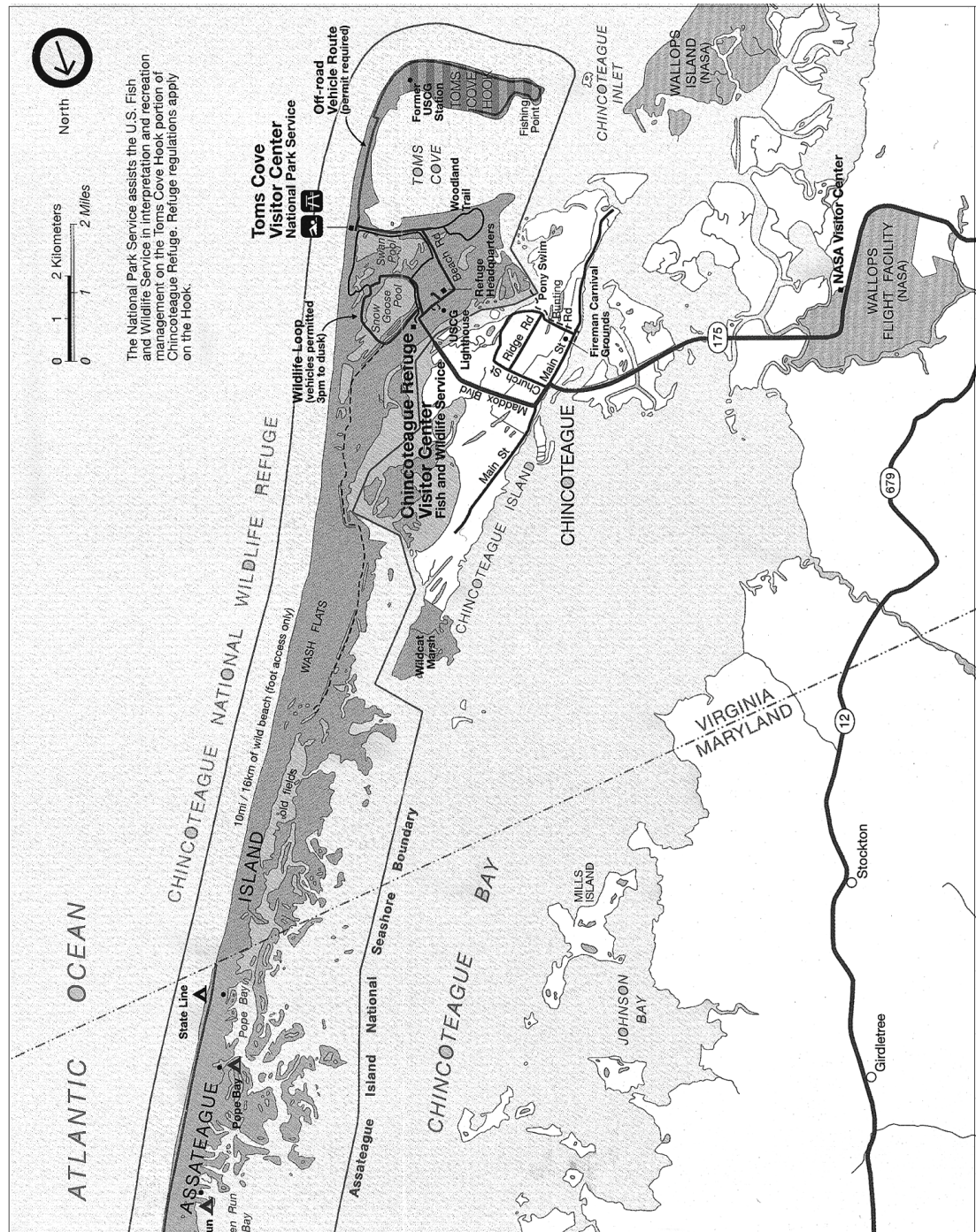
Chincoteague National Wildlife Refuge, a Virginia barrier island, is a strong candidate for the introduction of alternative modes of transportation. It has high levels of summer visitation, a single route to and from its most heavily used public facility (a swimming beach), sensitive natural resources that are directly affected by roads and parking lots, a close physical and economic relationship with a small town, and a strong need to sustain access to its beaches despite storms that regularly threaten closure of parking areas. Two alternative transit solutions were proposed including a point-to-point shuttle and an in-town circulator with a shuttle to the beach.

However, using transit to supplement or possibly replace auto access to the beach is a source of concern to business people of the town of Chincoteague, as they fear that such a change might decrease the number of visitors upon which their local economy depends. A transit solution must respond to those concerns with an effective program of public information and education, service to the dispersed motels and campgrounds, vehicles that accommodate large parties with many bulky items, and a holiday-atmosphere appearance.

■ 2.0 Background Information

2.1 Location

Chincoteague National Wildlife Refuge is a barrier island located approximately three miles off the coast of Virginia. It is the southern end of Assateague Island. Assateague National Seashore and Assateague State Park occupy the Maryland portion of the island. Access is via State Highway 175, across six bridges and through the island town of Chincoteague. (Refer to Figure 1 for location and basic physical configuration.)

Figure 1.

2.2 Administration and Classification

Chincoteague is a National Wildlife Refuge managed by the USFWS. The Refuge Manager is John Schroer. The superintendent of the Assateague Island National Seashore, which operates the beach area of the Refuge under an interagency agreement, is Marc Koenings.

2.3 Physical Description

Chincoteague NWR is a long and narrow island partially covered with pine forest, other vegetation and wetlands. The key physical characteristics of the island that are related to transportation are:

- Access is via a two-lane road across a bridge from Chincoteague Island.
- Good bicycle/pedestrian access is provided to the beach through the Wildlife Refuge. However, the Town is attempting to improve connections between lodging/camping areas in the Town and the refuge.
- The island is moving west at the rate of approximately five to 10 feet per year because of blowing and water driven sand. Storms blow sand off the dunes and occasionally bury beach parking lots and natural sites.
- The General Management Plan (GMP) of the Assateague Island National Seashore identified a threshold of 4,400 visitors per day who could be accommodated on the beach area. Given current parking limitations (961 spaces) visitation rarely exceeds 3,400. Therefore an additional 1,000 persons could be accommodated on the beach during peak days.

2.4 Mission and Goals of the Wildlife Refuge

The Chincoteague National Wildlife Refuge was established in 1943 to provide habitat and protection to migrating birds. The refuge also manages three areas south of Assateague Island – Assawoman Island and portions of Metompkin and Cedar Islands. Refuge management programs actively enhance the coastal habitat for the benefit of migratory and nesting birds and indigenous wildlife. The Refuge is open to recreational uses centered on wildlife and wildland activities that are in harmony with this primary objective. Swimming and beach recreation attract very large numbers of people to the island especially on summer weekends, and the NPS maintains a large parking lot just behind the dune. Birdwatching is also a very popular activity.

2.5 Visitation Levels and Visitor Profile

Chincoteague NWR accommodates 1.4 million visitors per year; with about one half of these visits occurring during the months of June, July and August, for beach-related recreation. (Each entry counts as one person.) Eighty-seven percent of those visitors spend at least one night in the vicinity. Most visitors come from within 200 miles, including the cities of Washington and Philadelphia but extending up and down the eastern seaboard and other parts of the United States. Visitation has been steady since the mid-1980s. This is the fourth most visited National Wildlife Refuge. Off-season visitors tend to be older, more affluent and less likely to get out of their car.

■ 3.0 Existing Conditions, Issues and Concerns

The Chincoteague National Wildlife Refuge has a very high number of visitors in the summers who use its fabulous swimming beach. The nearby town of Chincoteague has become economically dependent on this flow of tourists as its fishing trade has diminished. However, it is difficult to maintain a parking lot at the beach because of blowing sand and the shifting island, and maintaining a permanent parking lot has harmful environmental effects and accelerates the erosion and movement of the island.

In addition, more people could use the beach if the previously agreed number of beach parking spaces were greater. Local leaders are concerned that banning or reducing auto traffic to the beach would reduce visitation.

3.1 Transportation Conditions, Issues and Concerns

The central transportation issue at Chincoteague NWR, in the words of the Refuge Manager, is how to accommodate up to 4,400 daily beach users knowing that the island is moving and beach parking is likely to disappear some day. This means that it is physically difficult and there are negative environmental impacts of trying to establish a permanent beach parking area, especially one made of asphalt. (Parking lots and access roads are paved with crushed shells.) If the primary dune is artificially raised to inhibit sand from blowing west onto the parking lots, the sand tends to be blown south along the island to form a larger hook and filling Tom's Cove. Or, the enhanced dune is nevertheless blown onto the parking areas. One recent nor'easter buried the parking in five feet of sand. The policy now is to allow the sand to blow or wash onto the parking lots.

The demand to access the beach by automobile is very high on some weekends, especially Fourth of July and Labor Day. The 1993 Refuge Master Plan recommended a cap of 961 parking spaces and 4,400 people. Potential beach users have been known to wait several hours in their cars at the beach entrance (forming a two-mile queue) for others to leave and parking to become available. These tie-ups occur approximately 10 times per year now and always between 10:00 a.m. and 2:00 p.m. The current parking capacity cannot supply the permitted number of 4,400 beach users. With bicyclists and pedestrians, usage generally peaks at about 3,400.

Given the storm history of the island, the number of beach parking spaces may be greatly reduced or one day eliminated from the island as a result of natural forces. However, the present policy of the FWS is to allow the NPS to continue to build and maintain up to 961 beach parking spaces as long as there is a sufficient land base behind the beach. Therefore, it may be helpful to the FWS, the NPS and Town to find long-term transportation alternatives to access the beach if and when nature closes the parking lots.



If the beach parking were lost, one option would be for the FWS to acquire a site in town for a parking lot. The FWS is willing to explore this option, but only with the blessing and cooperation of local leaders. However, there is concern in the town of Chincoteague that a parking and collection site in town would be the beginning of the end of beach parking, which would result in decreased visitation and harm to the local economy. After several years of discussion, there is considerable support in the community to plan for the ultimate loss of parking at the beach.

There are several challenges involved in shifting to transit access to the beach:

- Beachgoers want to carry many bulky items that are not easily accommodated on public transit such as coolers, umbrellas, chairs, blankets, towels, toys, etc.;
- The system must accommodate multi-person parties;
- Moving people quickly off the beach with transit in the event of a thunderstorm is difficult;
- Collecting riders from the town of Chincoteague raises the question of whether there should be a single collection point and parking lot or whether buses should circulate to motels and campgrounds;
- The system must be user-friendly and compatible with the holiday atmosphere;
- Cost recovery from farebox revenue will be problematic because of the low demand in the winter and the need to encourage high ridership; and
- User education will be very important; the system must not be forced on the town or the visitors.

Bicycling

Bicycling is currently an alternative means of accessing the beach and the Wildlife Loop. Although bicycling in town and on the Refuge is very popular and conditions are of high quality on Refuge facilities, riding conditions between the Town and the Refuge are fair to poor. There is an off-road path from the causeway just before the Refuge entrance to a point just short of the beach (after which riders must squeeze along the side of the narrow road). In town, there is a paved shoulder along the access road for approximately only one-quarter mile, and that shoulder is less than four feet in width. There are no other paved shoulders, lanes or paths in town although there are a few unmarked wide curb lanes. Local and agency environmental representatives have blocked some of the locally generated proposals for expansion of roads for bicycling but there is significant local initiative at this point to expand bicycling opportunities.

Surveys indicate that an average of one bicycle arrives in town with every car and 1,000 bicycles per hour pass through one of the signalized intersections in town on a summer weekend. Approximately 1,500 bicycles access the island on a summer weekend day, and 1,000 on a summer weekday. Several local shops rent bicycles and/or mopeds.

Bridge Relocation

A related transportation issue is the proposed relocation of the existing State Highway 175 bridge. The existing two-lane steel structure is proposed to be replaced by a new bridge with a capacity of 1,000 cars per hour. The Virginia DOT is studying two alternative alignments.

3.2 Community Development Conditions, Issues and Concerns

The economy of the town of Chincoteague has evolved from one of fishing to tourism and recreation. Consequently, the management of the NWR is crucial to the livelihood of many local residents.

Local leaders and businesspeople are concerned that banning auto traffic to the beach will reduce visitation levels and hurt the local economy. On the other hand, they acknowledge that an early season storm could completely eliminate parking for the entire, short peak tourism season with no alternative means of access.

A recent study estimated that \$61.00 is spent in the region for every \$1.00 spent by the FWS at Chincoteague NWR. (The annual FWS budget is \$1 million.)

Bird watching is also a major economic factor and provides economic benefits during the off-peak season. It was estimated that \$9 million is spent locally each year by birders during the off-peak period between September and May.

3.3 Natural or Cultural Resource Conditions, Issues and Concerns

The natural resource issues related to transportation are:

- Trying to maintain a permanent beach parking lot has harmful environmental effects and accelerates the erosion and movement of the island.
- Excessive auto traffic brings noise and air pollution to the Refuge and increases the risk of collisions with animals, especially the endangered fox squirrel and the wild horses that have inhabited the island for several hundred years. The horses are normally contained in two grazing compartments, which lessens the chance of vehicle/horse accidents.
- Tom's Cove hook, at the southern end of Chincoteague, is a nesting area for the endangered piping plover. As a result, recreational uses of this area are limited.



3.4 Recreation Conditions, Issues and Concerns

Several recreation-related issues were described in the previous section on Transportation Conditions.

Seashore and refuge managers would like to create a “world-class” beach experience to capitalize on the extraordinary natural resources. They hope to build beach-changing facilities, thunderstorm shelters and restrooms that can be moved in 12 to 18 hours if a hurricane threatens and quickly replaced.

■ 4.0 Planning and Coordination

4.1 Unit Plans

Refuge and Seashore personnel believe that eventually the number of beach parking spaces will be reduced as a result of natural forces. However, the present policy of the FWS is to continue and allow the NPS to build and maintain temporary beach parking as long as there is a sufficient land base behind the beach. The Refuge manager feels that part of his mission is to find long-term transportation alternatives to the beach if and when nature closes the parking lots.

4.2 Public and Agency Coordination

A local committee was established in 1996 to discuss the circulation and parking issues with the FWS, the NPS and the Virginia Department of Transportation. FHWA and FTA are providing staff support, as well as this group attempts to reach consensus on the future of transportation on the island. At this point, consensus has not been achieved on the implementation of an alternative transportation system.

■ 5.0 Assessment of Need and System Options

5.1 Magnitude of Need

The need for an alternative system of beach access is certainly great at Chincoteague NWR. Not only is the number of people who could use the beach at one time limited by the number of allowable parking spaces, but blowing sands threaten to some day close the beach parking all summer if not eliminate it permanently, adversely affecting the local economy.

5.2 Range of Feasible Transit Alternatives

There are several feasible non-auto access options consistent with those identified in a 1986 study.

1. **Point-to-Point Shuttle between Town and Visitor Center** – A system of specially designed festive trams towed by tractor-type vehicles that picks up riders from a central parking and collection site in the town of Chincoteague (such as the Fireman Carnival Grounds) and transports them to the Tom's Cove Visitor Center and the beach. The route would cover approximately 12 miles round-trip and with headways preferably at 15 to 20 minutes and no more than 30 minutes. Service would initially be implemented during the peak season between Memorial Day and Labor Day.

2. **In-Town Circulator with Shuttle to the Visitor Center** – A system of specially designed festive trams towed by tractor-type vehicles that circulates to motels, campgrounds and a central parking and collection site in the town of Chincoteague and transports riders to the Tom's Cove Visitor Center and the beach. This alternative could be designed as either a fixed-route or a demand-responsive system. The route would cover approximately 15 miles round-trip and with headways preferably at 15 to 20 minutes and no more than 30 minutes. The service could be implemented in a modified demand responsive mode in which service would go to specific motels and campgrounds only when notified that there are passengers waiting. This could be integrated with an ITS system that would use kiosks to provide notification, along with information on transit alternatives to the automobile. Service would initially be implemented during the peak season between Memorial Day and Labor Day.

5.3 General Transit System Considerations

Any transit system on Chincoteague should:

- Introduce the transit system gradually with a maximum of public information, education and support, and with the caveat that they are supplementary to auto access.
- Maintain a mixture of auto and non-auto access to the beach for as long as nature allows, keeping in mind that some day transit (and bicycling) might be the only feasible choices to reach certain sections of the Chincoteague NWR.
- Design the transit vehicles specifically to accommodate large parties carrying many bulky items.
- Design the system to meet peak-hour demands to both access and leave the Refuge to encourage ridership and maintain the quality of the visitor experience.
- Include an interpretative narrative by the driver.
- Utilize the latest technology to inform riders of the timing of the next tram and/or the tram schedule, show the available capacity of the beach parking lot, or call a tram for pick-up. Lobby displays at motels, kiosks and cable television are among the methods that could be used.
- Include attractive signs and maps indicating the route, the stops, the fee, etc.
- Burn a fuel that minimizes offensive odors.
- Include thunderstorm shelters at the beach.
- Include racks for bicycles on the transit vehicles.
- Complement the Town's bicycle and pedestrian systems.

■ 6.0 Bibliography

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■ 7.0 Persons Interviewed

John Schroer, Superintendent, Chincoteague NWR

Marc Koenings, Superintendent, Assateague NS

John Burns, Chief Ranger, Assateague NS

Angela Tracy, Chincoteague NWR

Harold Paxton, Virginia DOT

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